

REMARKS

Claims 1-2, 8-35, 40, 41 and 43-66 are pending in the application. Claims 1, 2, 8-35, 40, 41 and 43-66 presently stand rejected. Claims 1, 19, 40, 51, 52, and 63-66 have been amended. The Applicant respectfully requests reconsideration of the present application in view of the amendments and the following remarks.

35 U.S.C. § 102 Rejections

Claims 1, 2, 8-19, 25-35, 40, 41, 43-55, 57-59 and 61-64 are rejected under 102(b) as being anticipated by Yasuda et al., U.S. Patent Number 4,947,398.

Claim 1, as presently amended, expressly recites:

“an optical tuning apparatus, comprising:

a first tunable wavelength selection element configured to define a first plurality of tunable transmission peaks separated by a first adjustable free spectral range, the first plurality of tunable transmission peaks within a gain bandwidth of a gain medium optically couplable to the optical tuning apparatus;

a second tunable wavelength selection element configured to define a second plurality of tunable transmission peaks separated by a second adjustable free spectral range, the second plurality of tunable transmission peaks within the gain bandwidth of the gain medium” (emphasis added).

Yasuda is directed to a laser device with wavelength stabilization control. However, Yasuda fails to disclose two tunable wavelength selection elements **both** of which define a

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plurality of transmission peaks within a gain bandwidth of the gain medium, as expressly claimed by the Applicant. Indeed, Yasuda expressly states that “the free spectral region FSR₁ of the etalon 4 must be wide enough to ensure that only one of the wavelengths λ_{m1} at the peaks of the transmission of the etalon 4 falls within the gain region of the laser medium 1” (emphasis added) (col. 3, lines 50-54). “The free spectral range FSR₁ of the etalon 4 between its peaks of the transmission is wide enough to ensure that other peaks of the transmission do not fall within the gain range of the laser medium 1” (emphasis added) (col. 3, lines 38-42). Thus, Yasuda fails to disclose “the first plurality of tunable transmission peaks within a gain bandwidth of a gain medium optically couplable to the optical tuning apparatus” and “the second plurality of tunable transmission peaks within the gain bandwidth of the gain medium” as expressly claimed by the Applicant.

Further, the Applicant respectfully submits that the intended use of the Applicant’s claimed invention results in a structure different from the structure of Yasuda. On page 6 of the instant Office Action, the Examiner states in response to the Applicant’s previous reply that “a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.” However, structures of Yasuda are not capable of performing the intended use of the Applicant’s invention.

Etalons 4 and 5 of Yasuda are sized so that etalons 4 and 5 act as band-pass filters with a plurality of transmission peaks (col. 1, lines 60-65). The transmission characteristics of etalons 4 and 5 are shown in Figures 2a and 2b, respectively. Factors relevant to the

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transmission characteristics of the etalons include the refractive index of the etalon material and the separation between surfaces of the etalons (col. 2, lines 40-50). Thus, for the FSR₁ of etalon 4 to ensure only one transmission peak is within the gain region of the laser medium, etalon 4 must be structured accordingly. While the transmission characteristics of etalons 4 and 5 can be varied (col. 2, line 64 to col. 3, line 2), FSR₁ of etalon 4 must be wide enough to ensure that only one of the transmission peaks is within the gain region of the laser medium (col. 3, lines 50-54). Thus, the etalon structures of Yasuda do not define a "first plurality of tunable transmission peaks within a gain bandwidth of a gain medium optically couplable to the optical tuning apparatus" and a "second plurality of tunable transmission peaks within the gain bandwidth of the gain medium" as expressly claimed by the Applicant.

In sum, Yasuda fails to disclose at least one of the expressly recited limitations of the Applicant's invention as presently claimed. Accordingly, the present invention would not be anticipated by Yasuda. Independent claims 19, 40, 51, 52 and 63 distinguish for at least the same reasons as claim 1. Claims 2, 8-18, 25-35, 41, 43-50, 53-55, 57-59, 61-62 and 64 are dependent claims and distinguish for at least the same reasons as their independent base claims in addition to adding further limitations of their own. Therefore, the Applicant respectfully requests that the instant § 102 be withdrawn.

35 U.S.C. § 103 Rejections

Claims 20-24, 56, 60, 65 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasuda.

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Dependent claims 20-24, 56, 60, 65 and 66 are patentable over the prior art of record for at least the same reasons as discussed above in connection with their respective independent claims, in addition to adding further limitations of their own. Accordingly, Applicants respectfully request that the instant § 103 rejections be withdrawn.

Conclusion

The Applicants submit that in view of the remarks and amendments set forth herein, all pending claims are in condition for allowance. Therefore, the Applicants respectfully requests the Examiner to issue a Notice of Allowance in this case

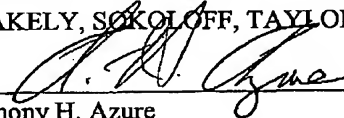
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Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Date: April 23, 2004


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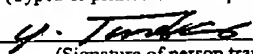
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